Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

1. (Cancelled)

2. (Previously Presented) The method of claim 17 wherein the temperature is less than or about 480 degrees Celsius.

3. (Original) The method of claim 2 wherein pressure is between about 200 mTorr and about 1 Torr.

4. (Original) The method of claim 3 wherein an inert gas is flowed over the surface with the SiH_4 and BCl_3.

5. (Original) The method of claim 4 wherein the inert gas is helium.

6. (Cancelled)

7. (Previously Presented) The method of claim 18, wherein the second source gas comprises about 0.1 percent BCl_3 or more.

8. (Original) The method of claim 7, wherein the second source gas further comprises an inert gas.

9. (Previously Presented) The method of claim 8, wherein the temperature is less then or about 480 degrees Celsius.

10. (Original) The method of claim 9, wherein the inert gas is helium.

11. (Original) The method of claim 8, wherein the pressure is between about 200 mTorr and about 1 Torr.

12. (Cancelled)

13. (Previously Presented) The method of claim 19 wherein the step of depositing the polysilicon film comprises substantially simultaneously flowing SiH_4 and BCl_3 over the surface.

14. (Cancelled)

15. (Previously Presented) The method of claim 13 wherein the temperature is less than or about 480 degrees Celsius.

16 (Original) The method of claim 15 wherein the pressure is between 200 mTorr and 1 Torr.

17. (Previously Presented) A method for depositing a doped polysilicon film comprising:

providing a surface; and

substantially simultaneously flowing SiH_4 and BCl_3 over the surface at a temperature between about 460 and about 500 degrees Celsius under conditions that achieve an average concentration in the doped polysilicon film of between about 7×10^{20} and about 3×10^{21} boron atoms per cubic centimeter, wherein the doped polysilicon film is polycrystalline as deposited.

18. (Previously Presented) A method for forming an in-situ doped polysilicon film, the method comprising:

providing a surface; and

substantially simultaneously flowing a first source gas comprising SiH_4 and a second source gas comprising BCl_3 over the surface at a temperature between about 460 and about 500 degrees Celsius under conditions sufficient to achieve in the doped polysilicon an average concentration of between about 7×10^{20} and about 3×10^{21} boron atoms per cubic centimeter, wherein during this flowing step, polycrystalline silicon is deposited.

19. (Previously Presented) A method for depositing an in-situ doped polysilicon film comprising:

providing a substrate comprising a substantially horizontal surface and a substantially vertical sidewall descending from the horizontal surface, the sidewall having a top; and

depositing the in-situ doped polysilicon film on the surface at a temperature between about 460 and about 500 degrees Celsius, wherein:

a first thickness of the film at its thinnest point on the vertical sidewall is at least 80 percent of a second thickness of the film on the sidewall at the top of the sidewall, and

a third thickness of the film on the horizontal surface is at least 200 angstroms,

wherein an average concentration of boron atoms in the polysilicon is between about 7×10^{20} and about 3×10^{21} per cubic centimeter,

and wherein, during the depositing step, doped polycrystalline silicon is deposited.

20. (New) The method of claim 17, wherein the resistivity of the doped polysilicon film is at least about 200 ohms/square and less than about 280 ohms/square.

21. (New) The method of claim 18, wherein the resistivity of the doped polysilicon is at least about 200 ohms/square and less than about 280 ohms/square.

22. (New) The method of claim 19, wherein the resistivity of the doped polysilicon is at least about 200 ohms/square and less than about 280 ohms/square.